Curriculum Handbook
for **Parents**

2000–2001

Alberta
LEARNING

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GRADE **4**

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Message from the
Minister of Learning

Alberta offers more schooling options than ever before. The opportunity for choice reflects our commitment to quality education—the solid foundation every child needs to learn, grow and succeed.

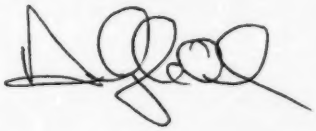
While students are at the centre of the education system, parents are vital partners. Your involvement in your child's education is critical to his or her success. To help your child succeed—you need to know what is being taught. This handbook is developed to provide you with that information. As well, I encourage you to continue working closely with your child's teacher who can provide you with invaluable information and guidance.

The *Curriculum Handbook for Parents* series is your guide to each stage of learning. It is an outline of what we expect our students to know at each grade level of their education. When you know what is expected at school, you can provide the home support your children need. By reading about what they are learning at school and discussing it at home, you are sending a very important message to your child—that you value education.

Alberta Learning revises curriculum in the core subject areas every eight to ten years. This ensures that course content remains current and relevant, and meets the needs of students preparing for their futures.

Education is a fundamental part of the Alberta Advantage, and government's goal is for Alberta to have the best-educated students in the world. We can accomplish this only one way—by working *together.* We are all partners in education—parents, teachers, trustees, administrators, community members—and we must work to address issues and help ensure Alberta students acquire the knowledge and skills they need for a successful future.

Our children are our future, and our most important investment.



Dr. Lyle Oberg
M.L.A. Strathmore-Brooks
Minister of Learning

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Introduction to the Grade 4 Handbook

This handbook provides parents with information about the Grade 4 curriculum—the knowledge, skills and attitudes students in Alberta are expected to demonstrate when they have completed the Grade 4 curriculum. It is based on the Alberta Learning *Program of Studies: Elementary Schools.* The handbook includes samples of what students are expected to learn in each subject. The complete curriculum for Grade 4 is available in all Alberta elementary schools.

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Introduction

TO THE ELEMENTARY SCHOOL CURRICULUM

Alberta Learning specifies what all students are expected to learn and be able to do. The curriculum is organized into separate subjects or course areas and is designed to enable teachers to make connections across subjects, and to develop programming that accommodates a range of student needs. We expect that teaching methods and schedules will vary from school to school and from class to class to meet the diverse learning needs of students.

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What Is Curriculum?

Curriculum describes what students are expected to learn. In Alberta, curriculum is developed by Alberta Learning and is described in documents called programs of study for elementary, junior high and senior high schools.

The curriculum specifies what all students in the province are expected to learn in each subject area at each grade level. It is developed by Alberta Learning in consultation with teachers, administrators, parents, representatives from post-secondary institutions, and professional and community groups.

Teachers are responsible for using the curriculum to plan their teaching activities and set appropriate levels of challenge according to students' learning needs and abilities. Teachers regularly assess student progress and report to parents, students and school administrators.

A document entitled *The Parent Advantage* provides tips and strategies to assist parents in helping their children at home with their school work. This resource is available for purchase from the Learning Resources Distributing Centre.

Achievement Tests

As well as being assessed by their teachers, students write provincial achievement tests in grades 3, 6 and 9. Grade 3 students write achievement tests in language arts and mathematics. Grades 6 and 9 students write achievement tests in language arts, social studies, mathematics and science. The results of these achievement tests are provided to school boards and schools. Parents may ask for their child's test results at their local school.

Information about provincial achievement testing in grades 3, 6 and 9 is provided in an Alberta Learning publication called *Parent Guide to Provincial Achievement Testing*. Individual guides for Grade 3 and for Grade 6 are available in elementary schools. The Grade 9 guide is available in junior high schools. The publications also may be obtained from Alberta Learning's Learner Assessment Branch.

Special Needs

School boards are required to provide each resident student with an education program, including access to special education programs. If you think that your child may have special needs, talk to your child's teacher. *Partners During Changing Times* is an information booklet for parents of children with special needs. It provides a general overview of how you can be involved in the education of your children. This document is available on the Alberta Learning web site or by contacting the Special Programs Branch, Edmonton. An additional resource, *The Parent Advantage*, provides tips and strategies to assist parents in helping their children at home with their schoolwork. This resource is available for purchase from the Learning Resources Distributing Centre. As well, *A Handbook for Aboriginal Parents of Children with Special Needs* provides information to assist Aboriginal parents in working with schools to meet the special needs of their children. This resource is also available for purchase from the Learning Resources Distributing Centre.

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English as a Second Language

Many children born in Canada have a first language other than English, and many students move here from non-English speaking countries. Schools provide additional assistance for English as a Second Language (ESL) students in grades 1 to 12. This helps them acquire sufficient fluency in English so they can integrate into the regular classroom as quickly as possible. If you think your child may have ESL needs, talk to your child's teacher.

Personal and Career Development

Preparing for life and work is a complex process that begins in the early years of schooling and continues throughout our lives. Alberta schools are taking an active role—along with parents and the community—in helping students move successfully from basic education to further studies and the workplace.

In the elementary grades, students explore their personal interests and values, and learn about different roles and career areas. They also begin to develop life skills, such as cooperating with others and being reliable.

Personal and career development activities and outcomes are integrated into all elementary courses and programs. In particular, the elementary health program focuses specifically on these topics.

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English Language Arts

Language is the basis of all communication. Language learning is an active process that begins at birth and continues throughout life. Children learn language as they use it to communicate their thoughts, feelings and experiences; establish relationships with family members and friends; and strive to make sense and order of their world. Responsibility for language learning is shared by students, parents, teachers and the community.

The aim of English language arts is to enable each student to understand and appreciate language, and to use it confidently and competently in a variety of situations for communication, personal satisfaction and learning.

By the end of Grade 4, students will listen, speak, read, write, view and represent to:

◆ ***explore thoughts, ideas, feelings and experiences***

- compare new ideas, information and experiences to prior knowledge and experiences
- identify areas of personal accomplishment and areas for enhancement in language learning and use
- identify other perspectives by exploring a variety of ideas, opinions, responses and oral, print and other media texts
- use talk, notes, personal writing and representing to record and reflect on ideas, information and experiences

◆ ***comprehend and respond personally and critically to oral, print and other media texts***

- preview sections of print texts to identify the general nature of the information and to set appropriate purpose and reading rate
- extend sight vocabulary to include words frequently used in other subject areas
- monitor understanding by confirming or revising inferences and predictions based on information in text
- use text features, such as headings, subheadings and margin organizers, to enhance understanding of ideas and information
- integrate knowledge of phonics and sight vocabulary with knowledge of language and context clues to read unfamiliar words in context
- use junior dictionaries, spell-check functions and electronic dictionaries to confirm the spellings or locate the meanings of unfamiliar words in oral, print and other media texts
- experience oral, print and other media texts from a variety of cultural traditions and genres
- identify the main events in oral, print and other media texts; explain their causes, and describe how they influence subsequent events
- compare similar oral, print and other media texts and express preferences, using evidence from personal experiences and the texts
- explain how language and visuals work together to communicate meaning and enhance effect
- identify and explain connections among events, setting and main characters in oral, print and other media texts

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- produce oral, print and other media texts that follow a logical sequence, and demonstrate clear relationships between character and plot
- produce narratives that describe experiences and reflect personal responses

◆ ***manage ideas and information***

- use organizational patterns of expository texts to understand ideas and information
- ask relevant questions, and respond to questions related to particular topics
- locate information to answer research questions, using a variety of sources, such as maps, atlases, charts, dictionaries, school libraries, video programs, elders in the community and field trips
- recall important points, and make and revise predictions regarding upcoming information
- organize ideas and information, using appropriate categories, chronological order, cause and effect, or posing and answering questions
- make notes of key words, phrases and images by subtopics; cite titles and authors of sources alphabetically
- examine gathered information to identify if more information is required; review new understanding
- communicate ideas and information in a variety of oral, print and other media texts, such as short reports, talks and posters

◆ ***enhance the clarity and artistry of communication***

- use pre-established criteria to provide support and feedback to peers on their oral, print and other media texts
- revise to ensure an understandable progression of ideas and information
- write legibly, using a style that demonstrates awareness of alignment, shape and slant
- use special features of software when composing, formatting and revising texts
- use an increasing variety of words to express and extend understanding of concepts related to personal interests and topics of study
- identify simple and compound sentence structures, and use in own writing
- identify past, present and future action
- use phonic knowledge and skills and visual memory, systematically, to spell multisyllable words in own writing
- apply strategies for identifying and learning to spell problem words in own writing
- present to peers ideas and information on a topic of interest, in a well-organized form
- add interest to presentations through the use of props, such as pictures, overheads and artifacts
- give constructive feedback, ask relevant questions, and express related opinions in response to oral and visual presentations

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◆ ***respect, support and collaborate with others***

- appreciate that responses to some oral, print or other media texts may be different
- identify and discuss main characters, plots, settings and illustrations in oral, print and other media texts from diverse cultures and communities
- use appropriate language to acknowledge special events and to honour accomplishments in and beyond the classroom
- ask for and provide information and assistance, as appropriate, for completing individual and group tasks
- share personal knowledge of a topic to develop purposes for research or investigations and possible categories of questions
- use brainstorming, summarizing and reporting to organize and carry out group projects.

Language Arts in Language Programs (Immersion and Bilingual)

In addition to studying the English language arts, students registered in an immersion or a bilingual program follow a language arts course in the target language; e.g., French, Ukrainian, German. In these programs, this target language is also used as the language of instruction in other subject areas, such as mathematics, science, social studies.

Mathematics

Mathematics is a common human activity, increasing in importance in a rapidly advancing, technological society. A greater proficiency in using mathematics increases the opportunities available to individuals. Students need to become mathematically literate in order to explore problem-solving situations.

At all levels, students benefit from working with appropriate materials, tools and contexts when constructing personal meaning about new mathematical ideas.

The main goals of mathematics education are to prepare students to:

- use mathematics confidently to solve problems
- communicate and reason mathematically
- appreciate and value mathematics
- commit themselves to lifelong learning
- become mathematically literate adults, using mathematics to contribute to society.

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As students acquire the specified outcomes, they will also be expected to use the following seven mathematical processes:

Communication
Connections
Estimation and Mental Mathematics
Problem Solving
Reasoning
Technology
Visualization.

The mathematics content is organized into four strands:

Number
Patterns and Relations
Shape and Space
Statistics and Probability.

Number

By the end of Grade 4, students will:

- ◆ Demonstrate a number sense for whole numbers 0 to 10 000, and explore proper fractions.

Sample Student Tasks

- Use words to write the number that is:
  150 less than 500
  275 greater than 450
  895 rounded to the nearest ten
  895 rounded to the nearest hundred.
- Let the base-10 flat represent one whole square. Use centimetre cubes to build a one-layer shape that is less than one whole square. Record your shape on cm grid paper. Write a fraction and a decimal to tell how much of the square is covered by your shape; is not covered by your shape.

- ◆ Apply arithmetic operations on whole numbers, and illustrate their use in creating and solving problems.

Sample Student Tasks

- Each week day a mail truck leaves the city post office to deliver mail to our town. The distance to the city and back to our town is one hundred thirty-four kilometres.
  Use base-10 blocks to show how you could represent the number of kilometres the mail truck travels each week.
  Show how you might use numbers to calculate the total number of kilometres travelled in one week.

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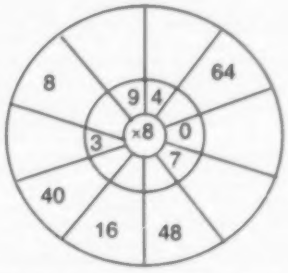
- Use a calculator to find two numbers whose product is 462. How many such numbers are there?

- Fill in the missing numbers.



◆ Use and justify an appropriate calculation strategy or technology to solve problems.

Sample Student Tasks

- Explain how you can find the answers to the following questions faster by using mental mathematics strategies rather than by using a pencil and paper algorithm or the calculator.
  $3 \times 204 = ?$
  $56 \div 9 = ?$

◆ Demonstrate an understanding of addition and subtraction of decimals.

Sample Student Tasks

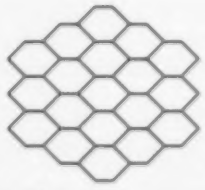
- Show how you can solve the following problems, using base-10 blocks.
  Diana bought a magazine priced at $1.49 and a package of doughnuts priced at $2.18. What was the total cost, before taxes?
  Sam had a roll of paper 4.2 m long. After he cut off a piece to make a banner, there were 2.5 m left on the roll. How long was the piece he cut off?

Patterns and Relations

By the end of Grade 4, students will:

◆ Investigate, establish and communicate rules for, and predictions from, numerical and non-numerical patterns, including those found in the community.

Sample Student Tasks



- Bees made a honeycomb. They started on day 1 with the middle cell. Each day they added another ring of cells all around the honeycomb.
  How many cells were there after the 7th day?
  What was the first day on which there were more than 1000 cells?

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Shape and Space

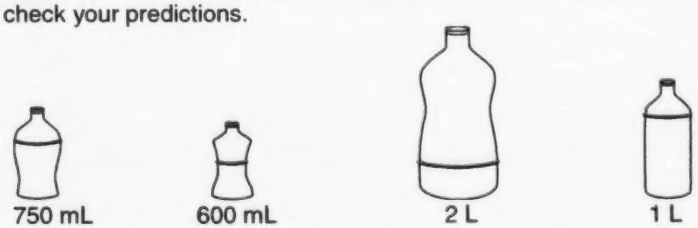
By the end of Grade 4, students will:

◆ Estimate, measure and compare, using decimal numbers and standard units of measure.

Sample Student Tasks

- Measure a variety of items in the room.
  Make a list and record the measurements without the unit of measure. Exchange papers with a friend who must complete the list by adding the units; e.g.,
  My pencil is 172 _____ long.
  My book is 0.8 _____ thick.
  Prepare a second list changing the unit of measure. For example, measure the pencil in mm, and write: "My pencil is 172 cm long." Leave out the decimal point. The friend must decide where to place the decimal point.

- The following plastic containers have elastic bands placed at different heights: a 750-mL cooking oil bottle, a 600-mL vinegar bottle, a 2-L drink bottle and a 1-L drink bottle. Estimate the number of mL needed to fill each container to the elastic band. Order your estimates. Find containers like the ones shown, and measure to check your predictions.



- Jill's great-grandmother was born in the first decade of the 20th century. What might have been her year of birth? Explain. The year 2001 will begin the 3rd millennium. Will you be living by the first year of the 4th millennium? Why or why not?

◆ Describe, classify, construct and relate 3-dimensional objects and 2-dimensional shapes, using mathematical vocabulary.

Sample Student Tasks

- Demonstrate each step of the following activity on a 5 by 5 geoboard. Record each step on geodot paper.
  Outline the largest possible rectangle that is not square. Use an orange marker.
  Identify the number of points touched by the outline. Colour them brown.
  Place a geoband that is equal in length and perpendicular to a short edge but is not a line of symmetry. Use a yellow marker.
  Place a geoband that is equal in length and parallel to a short edge but is not a line of symmetry. Use a blue marker.
  Find a way to name and describe the location of the point where the perpendicular and parallel lines intersect. Colour it green.
  What fraction of the whole rectangle is each outlined part?

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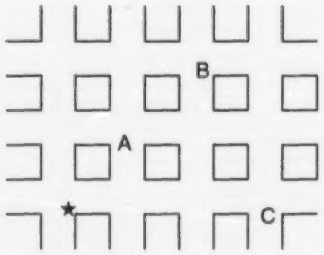
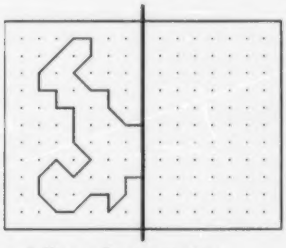
- Use numbers and direction words to describe the relative positions of objects in two dimensions, using everyday contexts.

Sample Student Tasks

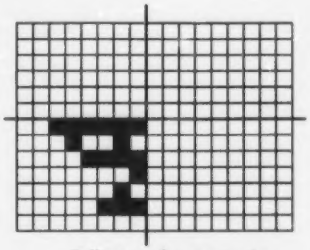
- On a simplified street map, locate special points of interest; e.g., store, school, mall, bridge; from a point of reference (home) ★. Describe the path from ★ to B, using directions, N, S, E, W.



- Complete each picture, using the lines of symmetry shown.



1 line of symmetry



2 lines of symmetry

Statistics and Probability

By the end of Grade 4, students will:

- Collect first- and second-hand data, assess and validate the collection process, and graph the data.

Sample Student Tasks

- A Grade 4 class wants to learn if more families make popcorn at home in the microwave than by any other method.
  - How might they word their question?
  - Whom should they survey? Why?
  - What method should they use to best keep their information organized? Explain with words and a drawing.

- Design and use simple probability experiments to explain outcomes.

Sample Student Tasks

- For each of the following, draw a spinner that matches the statement.
  - It is impossible to land on 5.
  - You are more likely to land on red than on green.
  - It is equally likely that the spinner will stop on red, yellow, blue or white.
  - You are certain to spin an even number.

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Parent Document

The booklet *Working Together in Mathematics Education* provides an overview of the new mathematics curriculum and shows some of the knowledge, skills and attitudes students are expected to learn. It presents some ways parents and others can support student learning in mathematics.

Working Together . . . is available for purchase from the Learning Resources Distributing Centre. This booklet is also available for viewing and downloading from the Alberta Learning web site.

Science

Learning about science helps students to understand and interpret the world around them. The purpose of the program is to encourage and stimulate children's learning by nurturing their sense of wonderment, by developing skill and confidence in investigating their surroundings, and by building a foundation of experience and understanding upon which later learning can be based.

Skill and Attitude Outcomes

In elementary science, students develop their skills of inquiry and problem solving. In science inquiry, the focus is on asking questions, exploring materials and finding answers based on evidence. In problem solving, the focus is on practical tasks—finding ways of making and doing things to meet a specific need, using available materials.

By the end of Grade 4, students are expected to:

- identify patterns and order in objects and events studied
- record observations, using pictures, words and charts, with guidance in the construction of charts
- make predictions and generalizations, based on observations
- investigate a practical problem, and develop a possible solution.

The science program also plays a role in the development of student attitudes. At all levels of the elementary science program, students are expected to demonstrate positive attitudes toward the study of science and the application of science in responsible ways.

Science topics studied in Grade 4.

Waste and Our World

Students learn about wastes produced through natural processes and human technology. In studying natural systems, students learn that all plants, animals and other living things are made up of materials that are recycled through the environment again and again. In studying human consumption and wastes, students identify wastes produced within their community and learn the methods used for disposal. They learn that some waste materials are biodegradable, that some are reusable, and that others are toxic. They learn that personal action in reducing, reusing and recycling materials can help decrease the waste we accumulate.

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By the end of Grade 4, students are expected to:

- recognize that human activity can lead to the production of wastes, and identify alternatives for the responsible use and disposal of materials.

Wheels and Levers

Students learn about basic components of simple machines: how they are assembled, how they operate, how they are used. Students explore different techniques that can be used to transfer motion from one component to another, using simple connectors and various levers, gears, pulleys and band driven systems. As they work with these components, they learn the functions that each can perform, including sample applications and ways that they can be used in a larger system. As part of their studies, they examine how these simple machines are used to change the speed or force of movement.

By the end of Grade 4, students are expected to:

- demonstrate a practical understanding of wheels, gears and levers by constructing devices in which energy is transferred to produce motion.

Building Devices and Vehicles that Move

Students apply simple techniques and tools in building devices and vehicles that move. In constructing these objects, students apply previous learnings and structures and explore new applications for wheels, rollers, gears, pulleys and a variety of levers and connectors. They learn that different forms of energy can be used to propel their model devices: in some cases, a direct push; in other cases, the stored energy from a compressed spring or falling weight. On completing their projects, students learn to evaluate their work, by describing the effectiveness of the device and the appropriateness of materials used.

By the end of Grade 4, students are expected to:

- construct a mechanical device for a designated purpose, using materials and design suggestions provided
- explore and evaluate variations to the design of a mechanical device, demonstrating that control is an important element in the design and construction of that device.

Light and Shadows

Students learn about light by studying the effects of light on things within their environment. They learn about light sources, about materials that light can pass through and about what happens when a material blocks or changes the path of light. By observing shadows and their motions relative to a light source, students discover that light and shadows fall along a predictable path. They discover that mirrors, prisms and a variety of other materials can affect that path by reflecting and refracting light and by splitting light into colours.

By the end of Grade 4, students are expected to:

- identify sources of light, describe the interaction of light with other materials, and infer the pathway of a light beam.

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Plant Growth and Changes

Students learn about the structure and growth of plants by raising plants in the classroom and by observing plant growth within the community. They learn to recognize and describe different forms of leaves, stems, roots and flowers, and learn their functions in supporting the growth and reproduction of the plant. They learn various ways of starting new plants and the plants' requirements for growth. Through hands-on activities, students learn that different plants have different needs, and they gain skills and attitudes for their care.

By the end of Grade 4, students are expected to:

- demonstrate knowledge and skills for the study, interpretation, propagation and enhancement of plant growth.

Social Studies

In social studies, students develop the knowledge, skills and positive attitudes they need to be responsible citizens and contributing members of society. Students learn to acquire and evaluate information and ideas. They learn to interact with others and develop understanding and respect for people in Canada and other countries. The focus of the Grade 4 social studies program is Alberta—its geography and people, and the similarities between Alberta and Quebec.

Three topics are identified for Grade 4.

Alberta: Its Geography and People

Students learn about the geography of Alberta; the regions and natural resources. Throughout the unit, emphasis is placed on the interrelationship between people and their environment, as well as the impact people have on their environment. Students examine how natural resources are used and the resulting impact on Albertans and the environment. The intent of the topic is to develop an increased sensitivity to the importance of using natural resources wisely.

By the end of Grade 4, students are expected to:

- understand that the environment can affect the way people live
- understand that our way of life and our environment are affected by the presence and use of natural resources
- understand that conservation is important to Alberta's future
- use and interpret aerial maps of Alberta
- make an outline map of Alberta, accompanied by symbols and a legend showing major cities, mountains and main rivers
- demonstrate concern for the needs and future of Albertans
- cooperate in efforts to conserve natural resources.

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Alberta: Its People in History

Students learn about the people who have contributed to Alberta's history and development, beginning with the original inhabitants, and tracing the origin of people in Alberta's history. This topic focuses on the lives of Albertans through case studies of a Native community, a fur trading settlement and one or more of:

- a homestead settlement (1890–1939)
- immigration of a specific group into a specific area (1880–1930)
- the Great Depression (1929–1939)
- World War II (1939–1945)
- boom years (1947–).

The intent of this topic is to show students that a changing world often results in a changing lifestyle.

By the end of Grade 4, students are expected to:

- understand that contact between the Natives, the fur traders and the settlers in Alberta's history brought changes to their lifestyle
- understand that Albertans have been affected by historical events
- understand that Albertans, throughout the history of Alberta, have contributed to its development
- use historical maps and map legends to locate the territories occupied by different Native tribes, major fur trading posts and communities being studied
- identify how events in Alberta's history affected the lifestyle of Albertans
- appreciate the contributions made by many people/groups in Alberta's history
- appreciate and tolerate the decisions made by Albertans in different times and under different circumstances.

Alberta: A Comparative Study with Quebec

Students learn about the similarities between Alberta and Quebec. Geography, resources, occupations, leisure activities, language and customs are compared in the study, but the main emphasis is on people. The links that exist between the provinces, as well as the contributions of Albertans and Quebecois to the Canadian way of life, are examined. The intent of the topic is to develop an awareness of Canada as a bilingual country, and to develop understanding, appreciation and increased sensitivity to another region of Canada that has similarities and differences.

By the end of Grade 4, students are expected to:

- understand that there are similarities and differences between Alberta's and Quebec's geography and lifestyle
- understand that Canada is a bilingual country
- understand that Quebecois and Albertans have contributed to the Canadian way of life
- use maps of Canada to find Alberta's location relative to Quebec and the other provinces
- express ideas on the similarities and differences between Alberta and Quebec
- appreciate the many similarities and differences shared by Canadians
- appreciate the bilingual nature of Canada.

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Information and Communication Technology (ICT)

The ICT curriculum provides a broad perspective on the nature of technology, how to use and apply a variety of technologies, and the impact of ICT on self and society. Students in Kindergarten through Grade 12 will be encouraged to grapple with the complexities, as well as the advantages and disadvantages, of technologies in our lives and workplaces.

Technology is about the way things are done; the processes, tools and techniques that alter human activity. ICT is about the new ways in which we can communicate, inquire, make decisions, manage information and solve problems.

The ICT curriculum is not intended to stand alone as a course, but rather to become a part of core courses and programs.

The ICT curriculum will be implemented in all schools in Alberta over a three-year period, starting September 2000 through to June 2003.

General and Specific Outcomes

General outcomes for the ICT curriculum are statements that identify what students are expected to know and be able to do and value by the end of grades 1–3, 4–6, 7–9 and 10–12. There is a progressive sequence of skill development throughout the grades. Specific outcomes expand on the general outcomes and state in more detail what students are expected to learn. ICT outcomes are organized into three main categories, as shown in the charts below. For each category, all the general outcomes themselves also are listed.

Communicating, Inquiring, Decision Making and Problem Solving	
C1	Students will access, use and communicate information from a variety of technologies.
C2	Students will seek alternative viewpoints, using information technologies.
C3	Students will critically assess information accessed through the use of a variety of technologies.
C4	Students will use organizational processes and tools to manage inquiry.
C5	Students will use technology to aid collaboration during inquiry.
C6	Students will use technology to investigate and/or solve problems.
C7	Students will use electronic research techniques to construct personal knowledge and meaning.

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Foundational Operations, Knowledge and Concepts	Processes for Productivity
F1 Students will demonstrate an understanding of the nature of technology.	P1 Students will compose, revise and edit text.
F2 Students will understand the role of technology as it applies to self, work and society.	P2 Students will organize and manipulate data.
F3 Students will demonstrate a moral and ethical approach to the use of technology.	P3 Students will communicate through multimedia.
F4 Students will become discerning consumers of mass media and electronic information.	P4 Students will integrate various applications.
F5 Students will practise the concepts of ergonomics and safety when using technology.	P5 Students will navigate and create hyperlinked resources.
F6 Students will demonstrate a basic understanding of the operating skills required in a variety of technologies.	P6 Students will use communication technology to interact with others.

Examples of Specific Outcomes

By the end of Grade 6, students are expected to:

- organize information gathered from the Internet, or an electronic source, by selecting and recording the data in logical files or categories; and by communicating effectively, applying information technologies that serve particular audiences and purposes
- recognize that information serves different purposes and that data from electronic sources may need to be verified to determine accuracy or relevance for the purpose used
- solve problems requiring the sorting, organizing, classifying and extending of data, using such tools as calculators, spreadsheets, databases or hypertext technology.

The ICT curriculum, along with support documents, can be found on the Alberta Learning web site.

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Physical Education

The physical education program emphasizes active living, with a focus on physical activity that is valued and integrated into daily life.

The aim of the K–12 physical education program is to enable individuals to develop the knowledge, skills and attitudes necessary to lead an active, healthy lifestyle.

Four general outcomes form the basis of the K–12 curriculum. These are interrelated and interdependent. Each is to be achieved through participation in a variety of physical activities from the five dimensions outlined in general outcome A.

Each general outcome includes specific outcomes by grade, or by course name at the senior high school level. Specific outcomes for Grade 4 physical education follow.

By the end of Grade 4, students will:

General Outcome A

- acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Basic Skills

- select, perform and refine simple locomotor sequences
- consistently and confidently perform locomotor skills and combination of skills, by using elements of body and space awareness, effort and relationships to a variety of stimuli to improve personal performance
- select, perform and refine simple nonlocomotor sequences
- consistently and confidently perform nonlocomotor skills by using elements of body and space awareness, effort and relationships to a variety of stimuli to improve personal performance
- select, perform and refine ways to receive, retain and send an object with control
- consistently and confidently perform manipulative skills by using elements of body and space awareness, effort and relationship

Application of Basic Skills

- select, perform and refine basic skills in a variety of environments and using various equipment; e.g., water safety, skating, swimming
- select, perform and refine basic dance steps and patterns; e.g., creative, folk, line, sequence and novelty, alone and with others
- demonstrate a creative process to develop dance sequences alone and with others
- demonstrate critical thinking and problem-solving skills to modify games and achieve activity outcomes
- demonstrate strategies and tactics that coordinate effort with others; e.g., team, in order to achieve a common activity goal in lead-up games
- select, perform and refine the basic skills in educational gymnastics; e.g., use of different body parts, types of effort, space and relationships to develop a sequence
- select, perform and refine basic skills in individual activities; e.g., cross-country running

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By the end of Grade 4, students will:

General Outcome B

- understand, experience and appreciate the health benefits that result from physical activity.

Functional Fitness
- identify the nutritional needs related to physical activity
- demonstrate and describe ways to achieve a personal functional level of physical fitness through participation in physical activity
- experience movement, involving components of fitness

Body Image
- recognize and personally acknowledge individual and other attributes that contribute to physical activity

Well-being
- describe positive benefits gained from physical activity; e.g., physically, emotionally, socially
- demonstrate changes that take place in the body during physical activity
- understand the connection between physical activity, stress management and relaxation

By the end of Grade 4, students will:

General Outcome C

- interact positively with others.

Communication
- articulate and demonstrate respectful communication skills appropriate to context

Fair Play
- identify and demonstrate etiquette and fair play

Leadership
- select and demonstrate responsibility for assigned roles while participating in physical activity; and, accept ideas from others that relate to changing/adapting, movement experiences

Teamwork
- participate cooperatively in group activities
- identify and demonstrate positive behaviours that show respect for self and others

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By the end of Grade 4, students will:

General Outcome D

◆ assume responsibility to lead an active way of life.

Effort
- demonstrate a willingness to participate regularly in physical education class
- demonstrate factors that encourage movement

Safety
- follow rules, routines and procedures for safety in a variety of activities
- participate in, and identify the benefits of, safe warm-up and cool-down activities
- describe how to move safely in various environments; e.g., skating rink

Goal Setting/Personal Challenge
- set and achieve a long-term goal to increase effort and participation in one area of physical activity
- demonstrate different ways to achieve an activity goal that is personally challenging

Active Living in the Community
- identify how people, facilities and communities influence physical activity
- make decisions to be active within group activities or individually

Consideration for exemptions from participation in physical education is given for medical conditions, when accompanied by medical certification from a doctor to the principal; for religious beliefs, when accompanied by a statement in writing from a parent to the principal and where access to facilities is prohibitive. When exemption is granted, activities consistent with the outcomes of the specific dimension should be substituted where appropriate.

Health

BODY & MIND AWARENESS

Health education fosters the growth of knowledge, skills, attitudes and lifelong behaviours that will enable the student to assume responsibility for healthful living and personal well-being. The curriculum is organized around themes: self-awareness and acceptance, relating to others, life careers, body knowledge and care, and human sexuality. Parents decide if their child will participate in classes about human sexuality.

The child abuse prevention unit is an optional part of the health program. If this unit is offered in the school, parents decide if their child will participate.

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Self-awareness and Acceptance

Students learn to consider and appreciate their self-worth and the self-worth of others. They learn about human emotions and positive ways of expressing them. They also learn about personal characteristics and how their personal actions and decisions influence their relationships with others.

By the end of Grade 4, students are expected to:

- recognize that self and others change in many ways
- recognize that all feelings and emotions are normal and can be good
- learn the good and bad characteristics of personality.

Relating to Others

Students learn to appreciate the qualities of others. They learn how to develop and maintain healthful relationships, and they understand the importance of healthful relationships with others at school.

By the end of Grade 4, students are expected to:

- learn why everyone needs friends
- appreciate the needs of a new student.

Life Careers

Students learn to recognize their abilities and the abilities of others, and to understand the importance of work, occupations associated with work, and activities that help them prepare for work.

By the end of Grade 4, students are expected to:

- recognize the importance of sharing time and talents with others
- understand that career development is a lifelong process.

Body Knowledge and Care

Students learn the structure, function and development of the body, and appreciate the importance of good nutrition to good health. As well, students appreciate factors that contribute to healthful growth, understand how sickness and disease can be prevented, understand safety practices, and appreciate threats and aids to personal health and safety in their community.

By the end of Grade 4, students are expected to:

- recognize that teeth should last a lifetime
- identify nutritious foods
- understand the structure and function of the skin, hair and nails
- differentiate between prescription and nonprescription drugs
- identify people who could help a child who is being abused
- accept responsibility for disposing of wastes in appropriate receptacles.

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Human Sexuality

Students are expected to understand the structure and function of the reproductive system, and to understand puberty and its associated changes. As well, they are expected to understand how human life is created.

By the end of Grade 4, students are expected to:

- learn that puberty brings body changes, including secondary sex characteristics
- understand the basic function of reproduction.

Fine Arts

In the art program, students are expected to learn visual arts skills and concepts to interpret and communicate with visual symbols, to appreciate the cultural aspects of art, and to relate art to everyday life. The art curriculum has four major components:

reflection – responding to visual forms in nature and designed objects
depiction – developing imagery based on observations of the visual world
composition – organizing images and their qualities in the creation of works of art
expression – using art materials to make a meaningful statement.

Art

Students are expected to:

- analyze forms they see in nature and in man-made objects
- develop their own images of things that they see or imagine
- organize the images that they create
- use a variety of art materials
- use art for different purposes; for example, to illustrate stories, design fabrics and sculpt
- understand the contribution of art to our environment.

Drama

Drama is an optional program designed to be used as a separate subject or integrated with other subjects. In the drama program, students are expected to develop a positive self-concept by assuming other roles and acquiring dramatic skills. Eleven forms of dramatic expression are common components of an elementary drama program. The dramatic forms of expression include dramatic movement, mime, choral speech, storytelling, dramatization, puppetry, choric drama, readers' theatre, story theatre, playmaking and group drama.

Students are expected to:

- develop flexible, free and controlled movement
- learn to express themselves physically and imaginatively through movement and gesture
- recognize and reproduce the sounds of standard speech
- learn concepts of pitch, pace, pause, rate, intensity and volume
- accept role playing as a positive learning experience
- apply dramatization skills to puppetry by creating a character for a puppet

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- speak with energy
- speak with an appreciation of the voice as an instrument
- develop appreciation for enjoyment of literature
- develop the ability to create a dramatic story
- cooperatively build a drama to solve problems.

Music

In the music program, students are expected to develop an enjoyment of music, an understanding of a variety of music styles and an insight into music through meaningful musical activities, such as attending a concert or playing a musical instrument, and learning musical skills or knowledge about music. The music program is developed around the concepts of rhythm, melody, harmony, form and expression. These concepts are learned through participating in six skill areas: listening, moving, singing, playing instruments, reading and writing, and creating.

By the end of Grade 4, students are expected to:

- identify the four families of musical instruments (strings, woodwind, brass and percussion)
- identify introductions, interludes and codas
- use planned body movements to illustrate rhythmic and/or melodic patterns
- sing two- and three-part rounds and descants
- respond to changes in tempo, dynamics and mood while singing
- demonstrate skills on many instruments; for example, autoharp, Latin instruments, ukuleles, handbells and strings
- recognize sixteenth notes and rests
- develop skill in writing rhythm patterns
- create introductions, interludes and codas for songs
- create new music.

Language Programs and Courses Other Than English

French Immersion

In Alberta, many students have the opportunity to study in a French immersion program. This program, designed for non-French speaking students, offers students an effective way to become functionally fluent in French while achieving all of the objectives of the regular program of studies. Graduates from French immersion programs achieve a level of fluency in the target language that allows them to pursue their post-secondary studies in French or to accept employment in a workplace where French is the main language of communication.

Although there are many delivery models present in Alberta schools, the most common model offered is referred to as early immersion. In this delivery model, students begin their immersion experience in Kindergarten and continue on in the program to Grade 12. There are also French immersion programs with other entry points; the most popular of these being late immersion, where the entry point is typically in Grade 7. As can be expected, the French language proficiency achieved by students is in large part determined by the exposure to the target language. Regardless of the model (early or late French immersion), students in these programs generally achieve excellent results on Alberta's achievement and diploma testing programs, including English Language Arts. Learning the French language is an

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integral part of the immersion experience and must take place in all subject areas taught in French.

Any course, for example, mathematics, science, social studies, offered in the French language has as its basis a French version of the English program of studies. It is identical or comparable, except for Grade 1 to Grade 3 social studies, to the one used in the English program. However, a program of studies specific to French immersion students was developed for the learning/teaching of French Language Arts. Some of the main French Language Arts learning outcomes are presented below.

French Language Arts

In Division 2 of the French Language Arts program, group activities are viewed as an effective means to develop oral skills. The program places an emphasis on the development of skills related to the planning, monitoring and evaluating of students' communication projects.

As students progress from one grade to the next, they use their language skills learned through listening, reading, speaking, interacting with others, and writing to increase their knowledge of French as well as their language skills. Opportunities are provided for students to hone those skills in a variety of contexts, using learning materials that are increasingly challenging.

The French Language Arts program identifies a series of tasks to be performed at each grade level. From grades 4 to 6, students will be involved in activities that allow them to explore all aspects of their life and to express their creativity.

By the end of Grade 4, students are expected to select and effectively use several strategies to accomplish different tasks in each of the four communication areas: listening, reading, speaking and writing.

Listening

Students are expected to:

- listen to experiences and information shared by others
- connect related ideas and information obtained from presentations, conversations and from the media
- retell the events portrayed in a play, a movie or a novel read by the teacher
- express their feelings, ask questions or express opinions.

To achieve these tasks, students are expected to:

- determine the type and the amount of information required to achieve their purpose
- use key words, examples, comparisons and repetitions to construct and confirm meaning
- access prior knowledge of and recall their predictions
- determine the effectiveness of the strategies used to complete the task at hand.

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Reading

The reading material selected should be of some interest to students and provide them with an opportunity to increase their reading abilities.

Although related to students' previous experiences, by Grade 4, texts are more complex and tend to be increasingly abstract.

Students are expected to:

- locate and select information to answer research questions
- make connections between prior knowledge and new facts
- connect events and characters in a story
- compare their own experiences to the experiences of the persons/characters portrayed in the text.

To achieve these tasks, students are expected to:

- determine the type and the amount of information required to achieve their purposes
- make new predictions based on what they have already read to enhance understanding
- apply sentence analysis to break sentences into units when faced with unfamiliar sentence patterns
- recognize pronouns and be able to associate them with the nouns that they replace
- use clues, such as determiners for information on gender, number, possession
- use clues, such as connecting words to link ideas
- use prefixes and suffixes to read unfamiliar words.

Speaking

Students are expected to:

- participate in activities that allow them to express themselves spontaneously in small group discussions and problem-solving activities; share their views and explain how they solve a problem or accomplish a specific task
- organize and stage a play to a familiar audience.

Note: Students should also be encouraged to share their experiences and express their creativity.

To achieve these tasks, students are expected to:

- determine the type and the amount of information required to achieve their purpose
- use appropriate verb tenses to situate events in the past, present and future
- use appropriate words and expressions to compare facts, to describe a sequence of events, or to solve a problem
- use appropriate words or expressions to describe feelings, emotions, preferences and opinions

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- use teacher feedback to enhance word choices or sentence structures
- use vocabulary and sentence structures learned in other subject areas
- select and use appropriate material to enhance a presentation to a familiar audience
- adjust volume, intonation and pace when speaking.

Writing

Students are expected to:

- present and develop a topic
- describe the characters and the actions in a story
- write invitations, thank you notes, anniversary cards.

To achieve these tasks, students are expected to:

- determine the type and amount of information required to achieve their purpose
- recognize and correct the most common lexical English interferences
- order words correctly in the negative form; e.g., ne + verb + pas/jamais
- use appropriate pronoun referents
- use appropriate determiners (gender and number)
- use appropriate verb tenses to situate events in the past, present and future
- use organizational patterns of narrative structure
- spell frequently used words correctly
- verify the agreement between subject and predicate in the present tense
- verify plural forms of nouns
- use reference materials to confirm spellings or to correct grammar
- revise their writing.

Should this program be of interest to you, contact your school jurisdiction to explore local program offerings. A wealth of information is also available in the publication entitled *Yes, You Can Help! A Guide for French Immersion Parents* available for purchase from the Learning Resources Distributing Centre. Additional information is also available from the French Language Services Branch and from Canadian Parents for French (CPF) at 403–262–5187, Calgary.

French as a Second Language

In Alberta, French as a Second Language (FSL) is a program in which the French language is taught as a subject, often between 20 and 40 minutes a day, to help students to develop communication skills, language knowledge and cultural awareness in French.

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Depending upon a school board's language policy, French as a Second Language in elementary schools may be offered as an optional program or it may be a compulsory program. School boards may begin the program at different grade levels, since the program is based on developing language proficiency over a grade or grades without being grade specific. Many schools start the elementary program in Grade 4.

The program is designed to teach students how to understand what they hear and read in French, and to communicate their ideas orally and in written form, using an approach that is based on real-life experiences and situations. Students will also acquire knowledge about local, provincial and national francophone groups to become more aware of their presence and to better understand them. Students learn the French language vocabulary and grammar through thematic activities and projects that are related to real-life language experiences. At the same time, students are taught specific language learning strategies that will help them become better second language learners.

The program is organized into three language proficiency levels—Beginning, Intermediate and Advanced. Each of these proficiency levels is then further divided into three sublevels. In elementary schools, students start at the Beginning Level and progress through the Beginning 1, Beginning 2 and Beginning 3 sublevels. It could take students one or more school years to reach a particular language proficiency level, depending upon when the students start the program and how much time is given to French instruction in the school.

The language content is based upon the concrete experiences of elementary students. These experiences provide a real-life context for understanding ideas in French and for communicating similar ideas. Each level has its own set of experiences that fall into the following areas:

Beginning 1

- School
- People Around Us
- Weather
- Animals
- Holidays and Celebrations

Beginning 2

- Community
- Clothing
- Exercise
- Food
- Housing

Beginning 3

- Activities
- Vacations
- Fine Arts
- Trades and Professions
- Hygiene and Safety

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As students work through these experiences, they develop their ability to understand and communicate in French. At the end of each level, the students must demonstrate the following knowledge and skills:

Beginning 1	Beginning 2	Beginning 3
The ability to understand simple ideas contained in listening texts, such as the temperature in a weather forecast.	The ability to understand simple ideas contained in listening texts, such as understanding directions to the corner store, and to understand simple reading texts, such as understanding the main food items on a menu.	The ability to understand simple ideas contained in listening texts, such as a recorded message of flight departure times, and to understand simple reading texts, such as the safety rules on a safety week poster.
The ability to talk about concrete ideas, using simple sentences to identify, list or describe people, places or things, and to ask simple questions. For example, students could talk about their family by naming the members of the family, giving their ages and birthdays.	The ability to talk and write about concrete ideas, using simple sentences to identify, list or describe people, places or things, and to ask simple questions. For example, students could provide their address, telephone number and order pizza over the telephone. They could also write a simple note to describe their house to a pen pal.	The ability to talk and write about concrete ideas, using a number of simple sentences to identify, list or describe people, places or things, ask simple questions, give information and simple advice. For example, students could telephone a travel agency to ask for prices for different travel destinations. They could also write a simple announcement for the school's Night of Music concert to promote it in the community.

Once students have attained a Beginning Level 3 language proficiency, they then move into the next proficiency level, which is Intermediate Level 4.

Parent Document

The booklet *French as a Second Language (FSL) Program: A Guide for Parents* provides an overview of the Alberta FSL program. You may find this booklet particularly useful if you are considering FSL for a young child, helping an older child choose courses, or looking for ways to support your child in the FSL program. The booklet is available for purchase from the Learning Resources Distributing Centre and is also available for viewing and downloading from the Alberta Learning web site.

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Native Languages

Blackfoot and Cree language and culture programs are designed to enable students to learn Native languages and to increase awareness of Native cultures.

Students are expected to:

- learn basic communication skills in Blackfoot or Cree
- develop cultural sensitivity and enhance personal development
- develop originality and creativity
- develop a desire to improve their competency in Blackfoot or Cree.

Ukrainian Bilingual/ Ukrainian Language Arts

The Ukrainian bilingual program is designed for native speakers of Ukrainian and for students who speak other languages and wish to learn Ukrainian. Ukrainian Language Arts is offered as part of the Ukrainian bilingual program and is designed for native speakers of Ukrainian and for students who speak other languages and wish to learn Ukrainian. The bilingual program begins in Kindergarten and goes through to Grade 12.

Students are expected to:

- obtain information from others and from simple reference materials
- present information of personal interest in the classroom
- share personal opinions, ideas and feelings
- respond personally to literature of interest to children
- use literature and other art forms to reflect creatively upon personal experience.

Students are also expected to:

- express thoughts, orally and in writing, using accurate, simple sentences
- use correct word forms and word order to formulate simple messages of personal interest
- recognize and be sensitive to characteristic cultural features
- recognize the elements of the lifestyle of Ukrainians in their immediate environment and experience
- acquire concepts and develop learning strategies in subjects taught in Ukrainian.

Other Language Programs and Courses

Locally developed language courses are available for Arabic, German, Hebrew, Italian, Mandarin and Polish. Contact your school board office for information about which language programs it offers.

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